NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT FOR SMALL MUNICIPAL SEPARATE STORM WATER SEWER SYSTEMS

August 29, 2003

State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
AND THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

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STORM WATER MANAGEMENT PLAN

1.0 INTRODUCTION

This Storm Water Management Plan (SWMP) addresses the implementation measures to meet the requirements of the Phase II General Municipal National Pollutant Discharge Elimination System (NPDES) Permit for regulated small Municipal Separate Storm Sewer Systems (MS4s). Los Angeles County has been "automatically designated" as a small MS4 by the U.S. Environmental Protection Agency pursuant to 40 CFR 122.32(a)(1) because it is located within an urbanized area defined by the Census Bureau. The unincorporated County areas that are designated as urbanized areas are Littlerock, Pearblossom and Quartz Hill. **Figure 1** delineates these urbanized areas. **Appendix A** provides specific information on the areas of concern and delineates these areas in **Figures 1, 2 and 3 of Appendix A**. **Attachment 1 of Appendix A** delineates the Phase II area within the Antelope Valley.

According to Federal Regulations, the purpose of this Phase II permit is to regulate storm water discharges from small MS4s. The General permit requires regulated small MS4s to develop and implement a SWMP to:

1. Effectively prohibit non-stormwater discharges; and
2. Reduce the discharge of pollutants to the Maximum Extent Practicable.

The SWMP describes Best Management Practices (BMPs), measurable goals, and timetables for implementation in the following six Minimum Control Measures (MCMs):

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management, and
6. Pollution Prevention/Good Housekeeping for Municipal Operations

1.2 Historical Summary

Prior to March 10, 2003, the Los Angeles County and the Los Angeles County Flood Control District were governed by the Phase I MS4 permit in the Los Angeles Basin Area. **Figure 2**, shows the boundaries of the Phase I and Phase II permit areas. The Phase I MS4 permit requires all County facilities to comply with the Model Program "Public Agency Activities". This program

requires specific Best Management Practices for the reduction of storm water pollutant intrusion to the storm drain system. The County requires all of its field yards, including those located within the Antelope Valley, to comply with the Phase I requirements that became effective February 1, 2003.

1.3 Process

The Los Angeles County and the Los Angeles County Flood Control District serve as permittees to the General Phase II permit and shall:

1. Coordinate and facilitate activities necessary to comply with the requirements of the permit,

2. Provide technical and administrative support for committees that will be organized to implement the MCM; and

3. Provide personnel and fiscal resources for the collection, compilation and submittal to the Regional Board of annual reports.

2.0 LEGAL AUTHORITY

Currently, the County exercises legal authority for stormwater runoff control through ordinance No. 98-0021 adding Chapter 12.80 to Title 12 - Environmental Protection, of the Los Angeles County Code relating to control of pollutants carried by storm water and runoff to provide storm water pollution control. According to Section 12.80.390 and Section 12.80.580 the County of Los Angeles is authorized to enforce this ordinance, impose its conditions, restrictions and limitations with respect to the discharge, deposit or disposal of any storm water, and/or runoff to the storm drain system and/or receiving waters within any unincorporated area covered by a NPDES municipal storm water permit**.** Construction Site Stormwater Runoff Control legal authority is established by the Los Angeles Building Code Title 26. These existing ordinances and codes will be reviewed for their applicability to the Phase II permitted areas and legal authority will be established in accordance with the schedule in **Appendix G**.

3.0 MUNICIPAL AREA

The sources of concern are nuisance runoff, development and re-development projects and human behavior. These sources will be addressed in the urbanized communities of Littlerock, Pearblossom and Quartz Hill. A delineation of land uses present in the Antelope Valley was compiled to give insight to the potential sources of stormwater pollution. **Appendix A** summarizes the major list of land uses throughout the Antelope Valley and shows the percentage of these land uses. The land use categories are defined in **Appendix A. Attachment 2 of Appendix A** delineates these land uses**.**

The remaining unincorporated areas are characteristic of areas that do not outfall to a surface water or the MS4 and, therefore, will not be subject to the MCMs for this first generation Phase II permit. However, these areas will be re-evaluated at the end of the permit term for reconsideration.

4.0 MAJOR GOALS AND OBJECTIVES

The overall reduction strategy is to:

- Attain and protect the beneficial uses of water bodies in Los Angeles County; and
- Reduce pollutants in storm water to the Maximum Extent Practicable (MEP).

4.1 MEP definition

The Maximum Extent Practicable is defined as the standard for implementation of storm water management programs to reduce pollutants in storm water. The Clean Water Act (CWA), 402(p)(3)(B)(iii), requires that municipal permits "*shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants*. "

4.2 BMP types categorized by MCM

The MCMs will be implemented through BMPs that consist of structural and nonstructural controls and operation and maintenance procedures. The proposed BMPs may be applied before, during, and after pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters and the MS4. Further, the BMPs may be proprietary or nonproprietary.

The objective is to implement and/or require the implementation of the most effective combination of BMPs for storm water/urban runoff pollution control. The proposed BMPs are geared towards reducing the discharge of pollutants to the MEP standards. The effectiveness of the BMPs will be evaluated periodically throughout the term of the permit as specified in the MCMs. Refer to **Appendix B** for the proposed list of BMPs and entities responsible for their implementation.

4.3 Illicit discharge/non-stormwater unauthorized discharge list

The context of illicit discharges and illicit disposal used in this plan includes several categories as follows:

- Incidental spills or disposal of wastes or non-stormwater. These may be intentional, unintentional or accidental and would typically enter the storm drain system directly through drain inlets, catch basins or manholes or be deposited in the public right-of-way such that wash-off would reach the storm drain system.

- Discharges of sanitary sewage due to overflows or leaks; usually incidental but may be continuous.
- Continuous or intermittent discharges of prohibited non-stormwater other than through an illicit connection. These typically occur as surface runoff from outside the public right-of-way (e.g., area washdown from an industrial site).

4.4 Authorized non-storm water discharges/exemptions

The Permittees shall effectively prohibit non-stormwater discharges into the MS4 and watercourses, except where such discharges:

1. Are covered by a separate individual or general NPDES permit for non-stormwater discharges; or

2. Fall within one of the categories below, and meet all conditions when specified by the Regional Board Executive Officer:

    a. Category A – Natural flow:

        1) Natural springs and rising ground water;

        2) Flows from riparian habitats or wetlands;

        3) Stream diversions, permitted by the State Board; and,

        4) Uncontaminated ground water infiltration [as defined by 40 CFR 35.2005(20)].

    b. Category B - Flows from emergency fire fighting activity

    c. Category C - Flows incidental to urban activities:

        1) Reclaimed and potable landscape irrigation runoff;

        2) Potable drinking water supply and distribution system releases (consistent with American Water Works Association guidelines for dechlorination and suspended solids reduction practices);

        3) Drains for foundations, footings, and crawl spaces;

        4) Air conditioning condensate;

        5) Dechlorinated/debrominated swimming pool discharges;

        6) Dewatering of lakes and decorative fountains;

7) Non-commercial car washing by residents or by non-profit organizations; and

8) Sidewalk rinsing.

d. Category D - Short-term, seasonal, or intermittent discharges of pollutants that constitute low threat waste loads provided that the following discharges do not contain significant quantities of pollutants that could adversely affect designated beneficial uses:

1) Diverted stream flows;

2) Construction dewatering;

3) Dredge spoils dewatering;

4) Subterranean seepage dewatering;

5) Well construction and pump testing of aquifer supplies;

6) Geothermal well testing;

7) Hydrostatic testing, maintenance, repair, flushing and disinfection of potable water supply pipelines, tanks, wells, reservoirs, etc.;

8) Water treatment plant back flushing, residuals, and wasting;

9) Fire hydrant testing or flushing; and

10) Hydrostatic testing of newly constructed pipelines, tanks, reservoirs, etc., used for purposes other than potable water supply (gas, oil, reclaimed water, etc.).

The Regional Board Executive Officer may add or remove categories of non-stormwater discharges above. Furthermore, in the event that any of the above categories of non-stormwater discharges are determined to be a source of pollutants by the Regional Board Executive Officer, the discharge will no longer be exempt from this prohibition unless the Permittee implements conditions approved by the Regional Board Executive Officer to ensure that the discharge is not a source of pollutants. Notwithstanding the above, the Regional Board Executive Officer may impose additional prohibitions of non-storm water discharges in consideration of anti-degradation policies and Total Maximum Daily Loads (TMDLs).

4.5 Monitoring and Reporting Strategy

A team of inspectors will respond to calls received on the 1-800-hotline number. A computer tracking mechanism will be developed to log calls and the corresponding corrective actions (**see Figure 3, Illicit Discharge Elimination Strategy**).

5.0 PERFORMANCE MEASURES

The approach to managing the implementation of the Phase II NPDES Permit in the County of Los Angeles unincorporated areas will be a uniform application of the six MCMs within each of the three urbanized areas. For each MCM, **Appendix B** outlines the proposed measurable goals, BMPs and target dates.

Appendix C contains two tables, (1) Factor Formulas and (2) Performance Allocations. Site specific performance factors are derived from formulas provided by the Lahontan Regional Water Quality Control Board. One factor is based on the performance portion of the formula and the other on the population portion. When multiplied together, the product of the factors provide a minimum required frequency of events to conduct for each MCM per year. The allocations are the resulting number of events to be conducted based on the product of the factors. The factors differ for each MCM and are based on the number of:

- Storm drains,
- Catch basins,
- Parking lots (<50 spaces),
- Miles of streets,
- Anticipated construction permits overseen yearly, and
- People in the area of concern.

The program effectiveness will be determined by assessing each MCM on a yearly basis. The indicators to be used to complete the assessment are defined in **Appendix D** with associated target dates for conducting the assessment. The results of the assessment will allow for the determination of trends. The first permit cycle will establish baseline numbers for each MCM.

6.0 COMPLIANCE DATA COLLECTION

Compliance will be determined from a year end review of tracking records. Each MCM contains a mechanism for tracking each time a BMP is implemented. The responsible party will have to sign off on the tracking records to establish that the required BMP was implemented by the required deadline and/or frequency. The tracking records will be maintained by the responsible party and submitted to the Watershed Management Division at the end of the year for verification. The records will be compared to the Performance Standard requirements to insure compliance. At year's end the records will be reviewed for compliance with the MCM requirements and reported to the Regional Board in the Annual report due

September 15 of each year. The information contained in the Annual reports will be compared to the subsequent year's Annual report data. This comparison will allow assessments of:

1. The SWMP's effectiveness,
2. The implementation of the SWMP,
3. Status of measurable goals,
4. The effectiveness of BMPs; and
5. Improvement opportunities to achieve MEP.

Appendix E outlines the process for determining the SWMP's effectiveness. The records will be maintained and made available for at least five years following the date of generation.

At this time the County has not entered into any Separate Entity Implementing agreements. There are specific outfalls listed in **Appendix F** that do not fall under the County's jurisdiction.

7.0 MASTER SCHEDULE

Appendix G contains a master implementation schedule for the Storm Water Management Plan.

8.0 CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____

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Appendix A
Areas of Concern

The urbanized areas for the unincorporated Los Angeles County within the Antelope Valley defined by the U.S. Census 2000 are Littlerock, Pearblossom and Quartz Hill. The communities are characterized by low density single family residential, light commercial and industrial land uses. There are very few catch basins, open channels and curbed streets with gutters. The combined population in these areas is 24,000 with 9,000 in Littlerock, 3,000 in Pearblossom and 12,000 in Quartz Hill. Attachment 1 is a map showing the Boundary of the Phase II permit area within the Antelope Valley.

Attachment 2 contains a land use map for the Antelope Valley. The map identifies 12 major land uses as defined by the Southern California Association of Governments (SCAG) along with the percent that they represent within the region. The land use categories are defined at the end of this Appendix. The percentage that each land use represents in the Antelope Valley is as follows:

Table 1: Land Use

Land Use Category	Percentage
High density single-family residential	78.3
Light industrial	1.4
Vacant/urban vacant	0.2
Retail/commercial	0.2
Transportation	0.2
Low density single-family residential	0.7
Utility facilities	0.9
Rural residential	1.8
Nurseries and vineyards	0.3
Military installations	6.7
Agriculture	6.8
Other	2.5

The following are characterization tables for each of the three urbanized areas. The characterization tables identify potential outfalls of concern, the location of the outfall and where the outfall discharges. Each form is accompanied by a photograph.

MCM 1: Public Education and Outreach

BMPs	Measurable Goals	Target Dates	Assessment Tools
logo	Develop a logo/message for basis of program (either borrowed or new)	By the end of the second year of the permit's effective date.	Determine if the logo is recognizable. Do people know the basics of the storm water program? Use survey to determine people's knowledge.
Web Site Information	Set up a web site to provide information on stormwater management programs and general information.	Web-site to be accessible by the end of the second year of the permit's effective date.	Track the number of hits to the website and compare at the end of each year.
Countywide Hotline	Set up a toll-free hotline number as the general reporting contact to report clogged catch basins, illicit discharges/dumping and to obtain general information related to storm water issues.	Implement by the end of the second year of the permit's effective date.	Track the number of incoming calls by type.
Education Demonstrations	Distribute information to targeted audiences- K-12 schools.	Visit 20% of schools in the unincorporated area by the end of year 3 of thee permit's effective date.	Track pre-and post visit surveys to asses the audiences level of awareness
Leaflet	Develop and distribute leaflets informing, public employees, businesses and the general public of environmental hazards associated with illegal discharges and improper disposal of waste. Distribute leaflet at 2 outlets (County Department Public Counters, existing Poppy Fair).	The end of the second year of the permit's effective date.	Track where leaflets are distributed to determine the effectiveness of this outreach

MCM 2: Public Involvement and Public Participation

BMPs	Measurable Goals	Target Dates	Assessment Tools
Public Surveys	• Conduct baseline surveying of the general public to determine the level of knowledge about storm water pollution prevention measures. • Conduct a follow up survey to determine the level of increase of the general public's awareness of storm water pollution prevention measures and current polluting behaviors.	• Conduct survey by the end of the second year of the permit's effective date. • Conduct survey during the first quarter of year five of the permit's effective date.	Evaluate the results of the two surveys
Measure participation rates in County sponsored events.	Conduct surveys at County sponsored events	During years one, two and three of the permit's effective date.	Determine if the people attending are part of the intended target audience.
Involve public in the implementation of the SWMP	Post the Annual Report on the web for public review and comment	By the end of year 5 of the permit's effective date.	Track number of hits to web site. Review public comments to SWMP.

MCM 3: Illicit Discharge Detection and Elimination

BMPs	Measurable Goals	Target Date	Assessment
Ordinance	Develop and adopt ordinance prohibiting non-stormwater discharges	The end of the first year of the permit's effective date.	An ordinance provides the authority to prohibit non-stormwater discharges and provides for an enforcement mechanism.
Hotline and Procedures	Establish reporting mechanism and procedures to address non-stormwater discharges. Include illicit discharge response procedures.	The end of the second year of the permit's effective date.	Track number and types of calls received. Reveal "hot spot" area of incidents.
Leaflet	Develop and distribute leaflets informing public employees, businesses and the general public of environmental hazards associated with illegal discharges and improper disposal of waste to general public and businesses.	The end of the second year of the permit's effective date.	Track where leaflets are distributed to see the effectiveness of this targeted outreach.
Database	Develop a database system to track all illicit discharge incidents.	The end of the second year of the permit's effective date.	Track all illicit discharge incidents.
Storm Drain Map	Develop storm drain map	The end of the fourth year of the permit's effective date.	Track all known storm drain alignments and locations.

MCM 4: Construction Site Runoff Control

BMPs	Measurable Goals	Target Dates	Assessment
Ordinance requiring control of erosion, sediment, and other construction related pollutants at construction sites	Develop or update an erosion and sediment control ordinance.	By the end of the first year of the permit's effective date	
Construction guidance materials	• Develop erosion and sediment control practices • Address multiple construction activity-related pollutants • Focus on source minimization, education, good housekeeping, good waste management, and good site planning • Target construction areas and activities with the potential to generate significant pollutant loads • Require retention on the site, to the maximum extent practicable, of sediment, construction waste, and other pollutants from construction activity • Require, to the maximum extent practicable, management of excavated soil on site to minimize the amount of sediment that escapes to streets, drainage facilities, or adjoining properties • Require, to the maximum extent practicable, use of structural drainage controls to minimize the escape of sediment and other pollutants from the site • Require, to the maximum extent practicable, containment of runoff from equipment and	By the end of the first year of the permit's effective date	Submit Construction Guidance Materials to Regional Board for approval, revise as necessary.

	vehicle washing at construction sites, unless treated to remove sediments and pollutants		
Construction Control Measures	• Require wet-weather erosion control and storm water pollution prevention plans (SWPPPs) that include, by detail or reference, all appropriate construction BMPs • Require with the SWPPP a narrative discussion of the reasons used for selecting or rejecting BMPs • Require proof of a Notice of Intent and preparation of a State SWPPP as required by the General Construction Activities Permit for disturbed areas one acre or greater	By the end of the first year of the permit's effective date	Track number of NOI and SWPPP submittals
Procedures for the receipt and consideration of information submitted by the public	• Develop procedures • Tie in area to County-wide hot line	By the end of the first year of the permit's effective date	Track complaints and follow up
Procedures for Site Inspection	• Develop site inspection checklists • Develop procedures for construction site inspections • Develop procedures to require corrective action be undertaken by contractors at noncomplying sites • Develop procedures for enforcement action against noncomplying construction activity	By the end of the first year of the permit's effective date	Submit inspection procedure to Regional Board for approval, revise as necessary.
Inspection staff training	• Develop inspection staff training procedures • Train construction inspection staff	By the end of the first year of the permit's effective date and annually thereafter	Track number and type of employees trained, number of inspections
Inspection	• Inspect active construction sites	Commence by the end of the first year of the permit's effective date and as applicable thereafter	Track number of inspections yearly

MCM 5: Post Construction Runoff Control

BMP	Measurable Goals	Target Date	Assessment
Development Planning Guidance	• Develop method to identify which development projects are priority and which are exempt • Create a list of post construction BMPs	By the end of the first year of the permit's effective date	Submit to Regional Board for approval, revise as necessary
Planning Control Measures	Develop guidelines by which the approved post-construction BMPs are to be incorporated into development and redevelopment priority projects	By the end of the first year of the permit's effective date	Submit to Regional Board for approval, revise as necessary
Planning Process	• Develop storm water management guidelines that address the preservation and protection of riparian corridors, wetlands, and biological integrity • Incorporate stormwater guidelines into the CEQA checklist	By the end of the first year and a half of the permit's effective date	Submit to Regional Board for approval, revise as necessary. Track projects that have gone through CEQA process.
Employee Training	Conduct training for employees	By the end of the first year of the permit's effective date and annually thereafter	Track number of attendees and conduct pre- and post-session surveys
Developer Information Program	• Develop and distribute to private developers information such as storm water quality practices, maximization of pervious areas, BMP supplier information, and answers to frequently asked questions • Publish and disseminate hydrologic information such as rainfall mass curves and maps that represent the occurrence of the 85th percentile 24-hour storm • Make available technical information such as depth to ground water, soil permeability,	By the end of the first year of the permit's effective date	Submit to Regional Board for approval, revise as necessary. Track percent impervious area associated with land use types.

	extent of impervious cover, drainage area boundaries, perennial and ephemeral stream alignments, environmentally sensitive areas map, extent of native vegetation, impaired water bodies, slope and erosion potential		
Developer Training Program	• Develop outreach program aimed at developers on post-construction controls	By the end of the first year and a half of the permit's effective date	Track number of attendees and conduct pre- and post-session surveys

MCM 6: Pollution Prevention/Good Housekeeping for Municipal Operations

Best Management Practices	Measurable Goals	Target Dates	Assessment
Sewage System Operations – Spill/Leak/Overflow Response and Containment	• When a spill, leak, and/or overflow occurs keep sewage from entering the storm drain system to the MEP by covering or blocking storm drain inlets and catch basins, or by containing and diverting the sewage away from open channels and other storm drain facilities (using sandbags, inflatable dams, etc.). • Remove the sewage using vacuum equipment or use other measures to divert it back to the sanitary sewer system. • When disinfecting a sewage contaminated area, take every effort to ensure that the disinfectant or sewage treated with the disinfectant is not discharged to the storm drain system or receiving waters. Methods may include blocking storm drain inlets, containing and diverting disinfectant and sewage away from open channels and other storm drain fixtures, and removing the material with vacuum equipment.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes and/or a copy of the documents.
Sewage System Operations – Preventive and Corrective Maintenance	• During routine maintenance and inspection, note the condition of sanitary sewer structures and identify areas that need repair or maintenance. • Document suggestions and requests for repair and report the information to the appropriate manager or supervisor. • Prioritize repairs based on the nature and severity of the problem.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes and/or a copy of the documents.
Sewage System Operations – Cross-Connections	• Educate field staff to recognize suspected cross-connections to the sanitary sewer system during their daily activities. • Maintain accurate records of both sewer	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes and/or a copy of the documents.

Best Management Practices	Measurable Goals	Target Dates	Assessment
	connections and new sewer lines.		
Public Construction Activities Management	• All public construction activities shall be conducted in full compliance of the program set forth on private construction activities.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes and/or a copy of the documents.
Vehicle Maintenance/Material Storage	• Stormwater Pollution Prevention Plan. A stormwater pollution prevention plan will be developed and implemented, where applicable, for public vehicle maintenance/material storage facilities to minimize the potential for pollutant discharges to the storm drain system. • BMPs for Site Specific Control as part of the stormwater pollution prevention plan, appropriate BMPs must be selected and implemented, where applicable, to prevent or mitigate pollution generated from the specific activities at the site.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes and/or a copy of the documents.
Street and Road Maintenance – Material Management	• Street and road maintenance operations may include saw cutting, paving or the use of concrete materials. Source control BMPs will be implemented to address each of these activities individually, and are described below.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes and/or a copy of the documents
Street and Road Maintenance – Saw-Cut Slurry	• Do not perform saw-cut activities during wet weather, to the extent feasible. • Remove wet slurry from street or gutter and dispose of at an appropriate designated location. • Prevent slurry material entering catch basin openings, maintenance holes, and storm drain inlets to the extent possible during wet cutting and, where feasible, collect captured flow for proper disposal. • Clean up spills from equipment and activities and dispose properly store saw cutting materials away from drainage areas to prevent stormwater pollution, or implement other equally effective BMPs.	By the end of the second year of the permit's effective date	
Street and Road Maintenance – Paving	• Do not conduct paving activities during wet	By the end of the second	Activities will be tracked using logs,

Best Management Practices	Measurable Goals	Target Dates	Assessment
	weather to the extent feasible. • Prevent paving materials from entering catch basin openings, maintenance holes, and storm drain inlets to the extent possible during applicant of liquid or emulsified asphalt, seal coat, tack coat, slurry seal, fog seal, etc. • Provide secondary containment around materials if stored outdoors or if material from a spill could flow outdoors. • Keep only the minimum amount of hazardous materials on site. • Periodically check areas for spills, leaks, or unsafe storage methods.	year of the permit's effective date	charts, database, matrixes and/or a copy of the documents
Landscape and Recreation – Pesticide, Herbicide and Fertilizer Management	• Apply and handle pesticides and herbicides and keep detailed records in accordance with existing State regulations (California Title 3, Division 6, Pesticides and Pest Control Operations). The regulations cover a list of approved chemicals, product and application information, equipment use and maintenance procedures, and recordkeeping. • Apply and handle fertilizers in strict accordance with the label direction.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes and/or a copy of the documents.
Landscape and Recreation – Storage and Inspection	• Store materials in enclosed sheds or buildings or under cover on an impervious surface.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes and/or a copy of the documents.
Landscape and Recreation-Scheduling	• Do not over water landscaped areas, especially when irrigating after fertilizer/pesticide applications. Adjust watering locations and amounts to minimize non-stormwater runoff. • Ensure that no chemical applications are performed immediately before or during, a rain event or when water is flowing off the area to be applied.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes and/or a copy of the documents.

Best Management Practices	Measurable Goals	Target Dates	Assessment
Landscape and Recreation – Landscape Waste	• Require all employees and contractors who generate landscape waste to dispose of it at all Permittee-approved composting location or permitted landfill; include such provisions in landscape maintenance contracts. • Place temporarily stockpiled material away from watercourses, and berm or cover stockpiles to prevent material releases to the storm drain system.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes, and/or a copy of the documents.
Landscape and Recreation – Native Vegetation	• Determine existing native vegetation features (location, species, size, function, importance) and consider the feasibility of protecting them. • Consider elements such as their effect on drainage and erosion, hardiness, maintenance requirements, and possible conflicts between preserving vegetation and the resulting maintenance needs. • Where feasible, retain and/or plant selected native vegetation whose features are determined to be beneficial.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes, and/or a copy of the documents.
Landscape and Recreation – Municipal Swimming Pools	• Discharge filter backwash water and chemically treated water to the sanitary sewer, unless not possible. • If discharing to the storm drainage system, dechlorinate the water through mechanical means (such as letting the water sit for several days without adding chlorine) or chemical means (such as by adding sodium bisulfite). • Neutralize all other chemicals in discharges, such as acid wash residue, before discharging to the storm drain system. • Incorporate the above requirements into maintenance contracts.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes, and/or a copy of the documents.
Landscape and Recreation –	• Collect trash and debris from bins and along	By the end of the second	Activities will be tracked using logs,

Best Management Practices	Measurable Goals	Target Dates	Assessment
Recreational Water Bodies	water bodies to minimize the amount of trash and debris that may come in contact with the water. • Collect trash and debris form within waterbodies where feasible. • When necessary, increase collection during peak visitation months (generally June, July and August).	year of the permit's effective date	charts, database, matrixes, and/or a copy of the documents.
Storm Drain Operation and Management – Catch Basins	• Compile a list that provides the location of all catch basins. • Inspect and clean catch basins at least once per year. • Record the following minimum information when inspecting or cleaning catch basins: o dates inspected or cleaned, o locations of catch basins inspected or cleaned; o overall amount of material removed (estimated in either volume or dry weight).	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes, and/or a copy of the documents.
Storm Drain Operation and Management – Storm Drains	• Removal of trash and debris from open channel at least once per year for soft bottom channels, cleaning shall be during the time period Permitted by State and Federal regulatory agencies. • Proper handling and disposal of material removed during storm drain cleaning and maintenance at an approved landfill or recycling facility.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes, and/or a copy of the documents.
Storm Drain Operation and Management – Maintenance Activity Review	• Review current maintenance activities. • Evaluate if they directly or indirectly contribute pollutants to receiving waters. • Revise procedures as necessary to reduce the contribution of pollutants to receiving waters. • Educate employees on revised procedures during regular safety and tailgate meetings.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes, and/or a copy of the documents.

Best Management Practices	Measurable Goals	Target Dates	Assessment
Street and Road Maintenance – Sweeping	• Sweep curbed streets at a targeted frequency of at least monthly (or 12 times per year). • Where feasible, sweep areas that generate significant refuse more frequently than monthly. • Store paving materials away from drainage areas to prevent stormwater pollution or implement other equally effective BMPs. • Do not clean paving equipment on site; restrict equipment cleaning to an appropriate designated location.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes, and/or a copy of the documents.
Street and Road Maintenance – Concrete	• Wash concrete trucks off site or in designated areas on site, such that there is no discharge of concrete wash water into storm drains, open ditches, streets, catch basins, or other stormwater conveyance structures. • When washing pour concrete areas to remove the particles and expose the aggregate, contain the wash water for proper disposal. • Store concrete materials under cover, away from drainage areas, or implement other equally effective BMPs. • Avoid mixing excess amounts of concrete on site.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes, and/or a copy of the documents.
Good Housekeeping	• Prevent debris from entering the storm drain. • Clean up spills and leaks immediately using dry methods, whenever possible. • Sweep up dry materials and residue from cleaning operations. • Collect non-hazardous dry waste in designated, leak-proof contains and dispose properly. • Do not wash materials into a storm drain or	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes, and/or a copy of the documents.

Best Management Practices	Measurable Goals	Target Dates	Assessment
	bury spilled dry materials. • Promptly clean up trash, debris, and little from job sites and disposed properly. • Inspect vehicles and equipment regularly for leaks. • Place stockpiled materials away from catch basins, storm drain inlets, drainage paths, and natural waterways. • Control stockpiled materials if windy or rainy weather is predicted (e.g., tarps, beaming, sandbags, etc.) • Prevent stormwater from eroding loose soil and stockpiles. • Inspect stockpiles regularly and after significant rain events. • Keep paved areas adjacent to stockpiles and earthwork sites free from loose sediment and tracked materials. • Apply and store all products in accordance with manufacturer's instructions and proper safety measures. • Store products in labeled contains and with cover or lids.Do not clean or rinse equipment into a street, gutter, or storm drain.		
Employee Training	• Be educated about the potential pollutants that may be released as a result of maintenance activities. • Be educated regarding procedures and specific BMPs to be implemented during street sweeping, road maintenance, waste disposal, as well as regarding general good housekeeping practices. • Know how to effectively implement all applicable procedures and BMPs while conducting streets	By the end of the second year of the permit's effective date and annually thereafter	Activities will be tracked using logs, charts, database, matrixes, and/or a copy of documents.

Best Management Practices	Measurable Goals	Target Dates	Assessment
	and road maintenance activities.		
Parking Facilities	• Conduct regular sweeping or other equally effective measures to remove debris from Permittee-owned parking lots covered by this program. • Sweep Permittee-owned parking lots covered by this program at least once per year.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes, and/or a copy of the documents.
Emergency Procedures	• BMPs to reduce impacts to the storm drain system and receiving waters will be considered and implemented during emergency response and repair activities, to the extent that such measures do not compromise public health and safety. • After initial emergency response or emergency repair activities have been completed and essential public services have been restored, implement all appropriate BMPs when performing additional repairs, clearing conveyance structures, repairing or rebuilding infrastructure, etc.	By the end of the second year of the permit's effective date	Activities will be tracked using logs, charts, database, matrixes, and/or a copy of the documents.

Appendix B
Minimum Control Measures

The following tables contain the proposed BMPs, measurable goals and target dates for each of the six MCMs. The County of Los Angeles Department of Public Works is responsible for the implementation of the MCMs.

Appendix C

Table 1: Factor Formulas

MCM	Performance/population/year	
Public Education and Outreach	6 actions/20,000 population	
Public Involvement and Public Participation	4 actions/20,000 population	
Iliicit Discharge Detection and Elimination	3 actions/outlet * 20%/10,000 population	
Construction Site Runoff Control	5 actions/100 permits/10,000 population	
Post Construction Storm Water Management	4 actions/20,000 population	
Pollution Prevention and Good Housekeeping for Municipal Operations	7 actions(# miles of street/25 miles of street)/20,000 population OR 7actions(# of permittee owned parking spaces/25 parking spaces)/20,000 population WHICHEVER IS THE LESSER VALUE	

Appendix C

Table 2: Performance Allocations

Urbanized Area	Population
Quartz Hills	12000
Littlerock	9000
Pearblossom	3000
Total population= 24K per the 2000 US Census	

Number of Storm Drains	TBD
Number of Basins	TBD
Number of parking lots (<50 spaces)	TBD
Number of miles of streets	7,728 miles
Number of construction permits expected to be overseen yearly	TBD

MCM	Performance Factor (A)	Population Factor (B)	Required Events (A x B)	Performance Allocation (Event Type/ Number)
Public Education and Outreach	6	(24,000)/(20,000)=1.2	7.2 = 7	Web site info 3 Education demonstrations 4
Public Involvement and Public Participation	4	(24,000)/(20,000)=1.2	4.8= 5	Public Meeting announcements (storm water displays) 5

MCM	Performance Factor (A)	Population Factor (B)	Required Events (A x B)	Performance Allocation (Event Type/ Number)
Iliicit Discharge Detection and Elimination	(3/# of outlets)*20% TBD	(24,000)/(10,000)=2.4	TBD	Storm Drain Inspection TBD Spill reporting system actions TBD Complaint investigations TBD
Construction Site Runoff Control	5/100 permits TBD	(24,000)/(10,000)=2.4	TBD	Site inspections TBD Employee Training Events TBD Complaints TBD
Post Construction Storm Water Management	4	(24,000)/(20,000)=1.2	4.8= 5	Workshops 1 Employee Training 4
Pollution Prevention and Good Housekeeping for Municipal Operations	7 actions(# miles of street/25 miles of street) OR 7 actions(# of permittee owned parking spaces/25 parking spaces) TBD WHICHEVER IS THE LESSER VALUE	(24,000)/(20,000)=1.2	TBD	Catch basin cleanings TBD Street Sweeping TBD

***TBD- to be determined**

Appendix D: Assessment of Minimum Control Measures

Assessment of MCMs	Target Dates
Public Education and Outreach- Determine if the program is effective at laying the foundation of the stormwater program • Determine if icon is recognizable. Do people know the basics of the storm water program? Use survey to determine people's knowledge. • Conduct initial survey to establish a baseline of public awareness for stormwater pollution prevention. • Conduct a follow up survey and compare the results with the baseline survey. This will determine if current outreach is performing well. • Track the number of hits to the website. Compare the results for each year to determine the level of interest or if there is a need for increased advertising. Also track the number of illicit discharge reports and compare on an annual basis to determine any trends in the level of illicit discharges with regard to the Public Education Outreach efforts and the Illicit Discharge Detection efforts and compare at the end of each year. • Track the number of incoming calls by type. • Track the number of educational events conducted per year. • Track where leaflets are distributed to determine the effectiveness of this outreach	TBD
Public Involvement • Measure participation rates in County sponsored events.	TBD
Illicit Detection • An ordinance provides the authority to prohibit non-stormwater discharges and provides for an enforcement mechanism. • Track number and types of calls received. Reveal "hot spot" area of incidents. • Track where leaflets are distributed to see the effectiveness of this targeted outreach. • Track all illicit discharge incidents and compare annual tallies to determine the need to increase advertisement, leaflet passing out. • Track all known storm drain alignments and locations.	TBD
Construction • Track number of NOI and SWPPP submittals • Track complaints and follow up • Track number of inspections conducted annually • Track number and type of employees trained, number of inspections	TBD

Appendix D: Assessment of Minimum Control Measures

Assessment of MCMs	Target Dates
Post Construction • Employee Training • Planning Process • Developer Information Program • Developer Training Program	TBD
Housekeeping • Activities will be tracked using logs, charts, database, matrixes and/or a copy of the documents. • Track and inspect all field yards once per year. • Track the number of enforcement actions pertaining to pool water discharges. Compare on annual basis to determine the need for additional public outreach • Track the number of storm drains cleaned and track the amount of trash and sediment removed during cleanings.	TBD

Appendix E

Table 1: Verification Sequence

Task	Annual Target Date
Responsible entity submits record of annual tasks performed	July
Responsible Division Compiles and maintains data	August

Table 2: Validation Sequence

Task	Annual Target Date
Responsible Division Verifies records are consistent with SWMP requirements	August
Recommendations for subsequent years	August

Appendix F
Excluded Areas

The General Phase II permit, Attachment 5 lists Lake Los Angeles as an area of High Growth that may be subject to the Supplemental Provisions listed in Part E of the General Permit. The State Water Quality Control Board has determined that the Lake Los Angeles Area does not meet the requirements for the high growth designation. See attached e-mail from the State Water Quality Control Board.

The Palmdale Ditch will not be covered under the Los Angeles County's Phase II permit. This ditch, although a portion is within the County and the City of Palmdale, is owned operated and maintained by the Palmdale Irrigation District. The Ditch runs from just downstream of the Littlerock reservoir for approximately 10 miles and it outfalls to Palmdale Lake. Palmdale lake is owned, operated and maintained by the Palmdale Water District, however the land is currently leased by a private organization known as the Fin and Feather Club.

Una Lake, which is located in County unincorporated area is privately owned and will not be considered as part of the County's permitted area.

Appendix G

Implementation Schedule

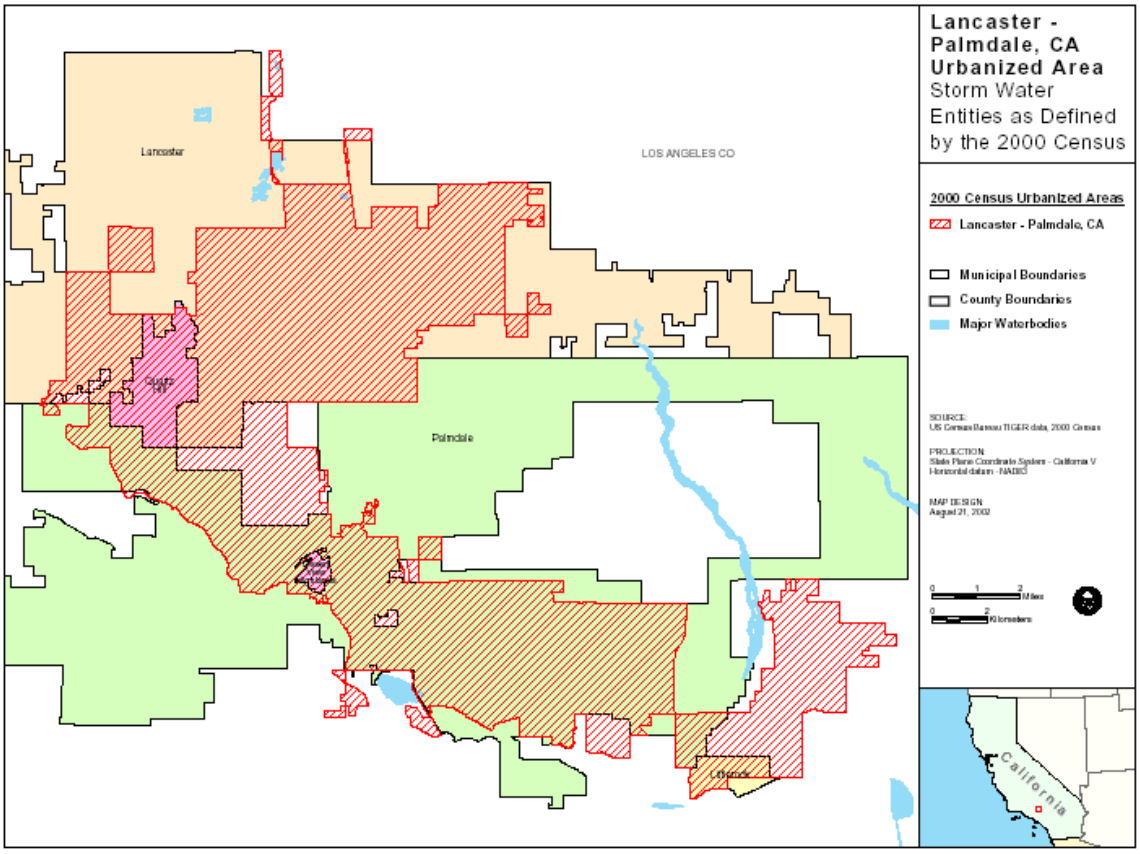
BMP/Task	1 yr	1.5 yrs	2 yrs	2.5 yrs	3 yrs	3.5 yrs	4 yrs	4.5 yrs	5 yrs
General									
Develop a tracking form to assess performance of responsible entity	X								
Public Education and Outreach									
Icon			X						
Web Site Information			X						
Countywide Hotline			X						
Education Demonstrations					X				
Develop a Leaflet			X						
Public Involvement and Public Participation									
Public Surveys			X						X
Measure participation rates in County sponsored events.	X		X		X				
Involve public in the implementation of the SWMP									X

BMP/Task	1 yr	1.5 yrs	2 yrs	2.5 yrs	3 yrs	3.5 yrs	4 yrs	4.5 yrs	5 yrs
Iliicit Discharge Detection and Elimination									
Ordinance	X								
Hotline and Procedures			X						
Leaflet			X						
Database			X						
Storm Drain Map							X		
Construction Site Runoff Control									
Ordinance requiring control of erosion, sediment, and other construction related pollutants at construction sites	X								
Construction guidance materials	X								
Construction Control Measures	X								
Procedures for the receipt and consideration of information submitted by the public	X								
Procedures for Site Inspection	X								
Inspection staff training	X		X		X		X		X
Inspection	X								

BMP/Task	1 yr	1.5 yrs	2 yrs	2.5 yrs	3 yrs	3.5 yrs	4 yrs	4.5 yrs	5 yrs
Post Construction Storm Water Management									
Development Planning Guidance	X								
Planning Control Measures	X								
Planning Process		X							
Employee Training	X		X		X		X		X
Developer Information Program	X								
Developer Training Program		X							
Pollution Prevention and Good Housekeeping for Municipal Operations									
Sewage System Operations – Spill/Leak/Overflow Response and Containment			X						
Sewage System Operations – Preventive and Corrective Maintenance			X						
Sewage System Operations – Cross-Connections			X						
Public Construction Activities Management			X						
Vehicle Maintenance/Material Storage			X						
Landscape and Recreation – Pesticide, Herbicide and Fertilizer Management			X						

BMP/Task	1 yr	1.5 yrs	2 yrs	2.5 yrs	3 yrs	3.5 yrs	4 yrs	4.5 yrs	5 yrs
Pollution Prevention and Good Housekeeping for Municipal Operations									
Landscape and Recreation – Storage and Inspection			X						
Street and Road Maintenance – Material Management			X						
Street and Road Maintenance – Saw-Cut Slurry			X						
Street and Road Maintenance – Paving			X						
Landscape and Recreation – Pesticide, Herbicide and Fertilizer Management			X						
Landscape and Recreation – Storage and Inspection			X						
Landscape and Recreation –Scheduling			X						
Landscape Waste			X						
Landscape and Recreation –Native Vegetation			X						
Landscape and Recreation – Municipal Swimming Pools			X						
Landscape and Recreation –Recreational Water Bodies			X						
Storm Drain Operation and Management – Catch Basins			X						
Storm Drain Operation and Management – Storm Drains			X						
Storm Drain Operation and Management – Maintenance Activity Review			X						

BMP/Task	1 yr	1.5 yrs	2 yrs	2.5 yrs	3 yrs	3.5 yrs	4 yrs	4.5 yrs	5 yrs
Pollution Prevention and Good Housekeeping for Municipal Operations									
Street and Road Maintenance – Sweeping			X						
Street and Road Maintenance – Concrete			X						
Good Housekeeping			X						
Employee Training			X		X		X		X
Parking Facilities			X						
Emergency Procedures			X						


Lancaster - Palmdale, CA Urbanized Area
Storm Water Entities as Defined by the 2000 Census
LOS ANGELES CO
Lancaster
Palmdale
Quartz Hill
Littlerock
2000 Census Urbanized Areas
Lancaster - Palmdale, CA
Municipal Boundaries
County Boundaries
Major Waterbodies
SOURCE:
US Census Bureau TIGER data, 2000 Census
PROJECTION:
State Plane Coordinate System - California V
Horizontal datum - NAD83
MAP DESIGN:
August 21, 2002
0 1 2 Miles
0 2 Kilometers
California

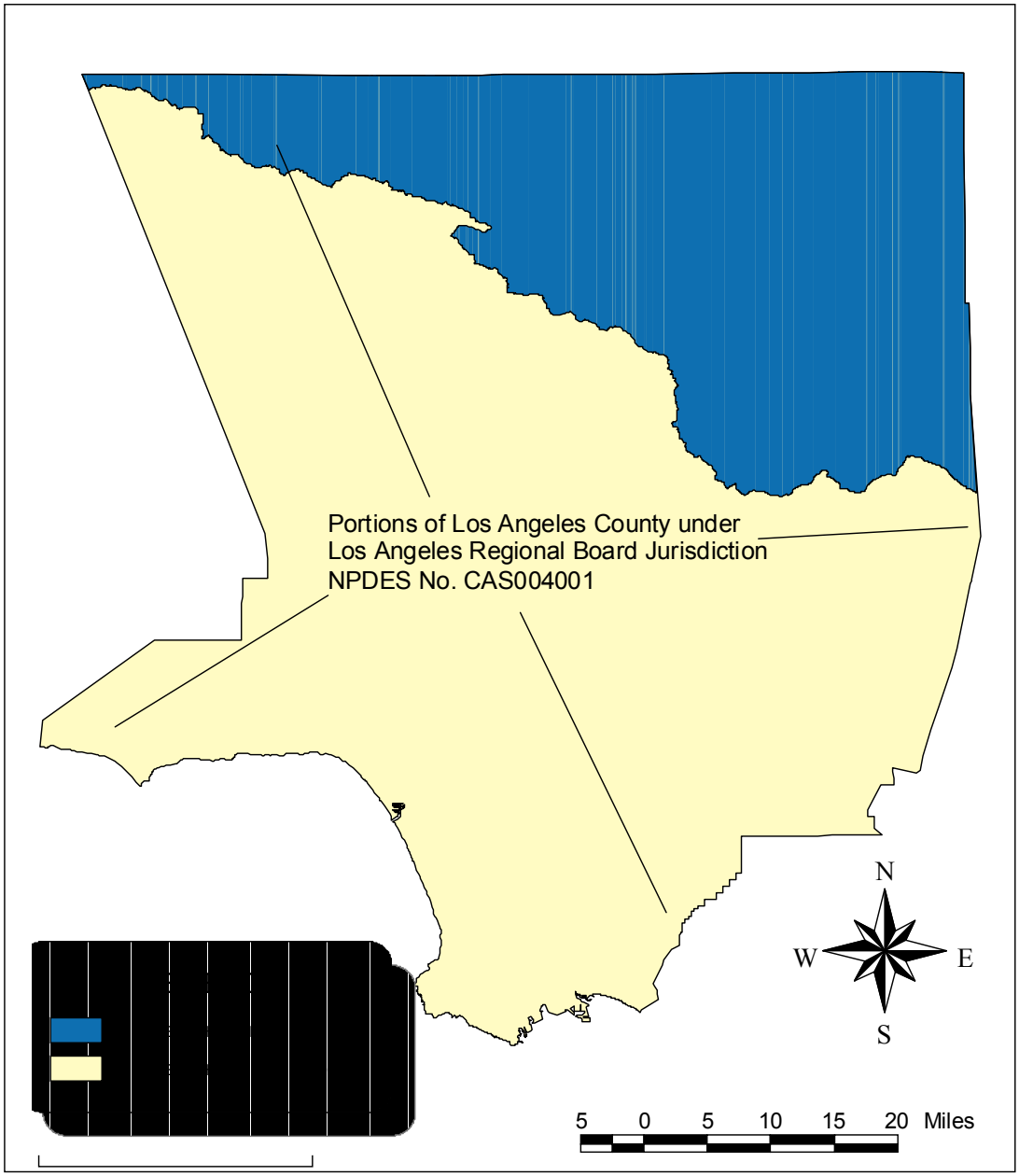
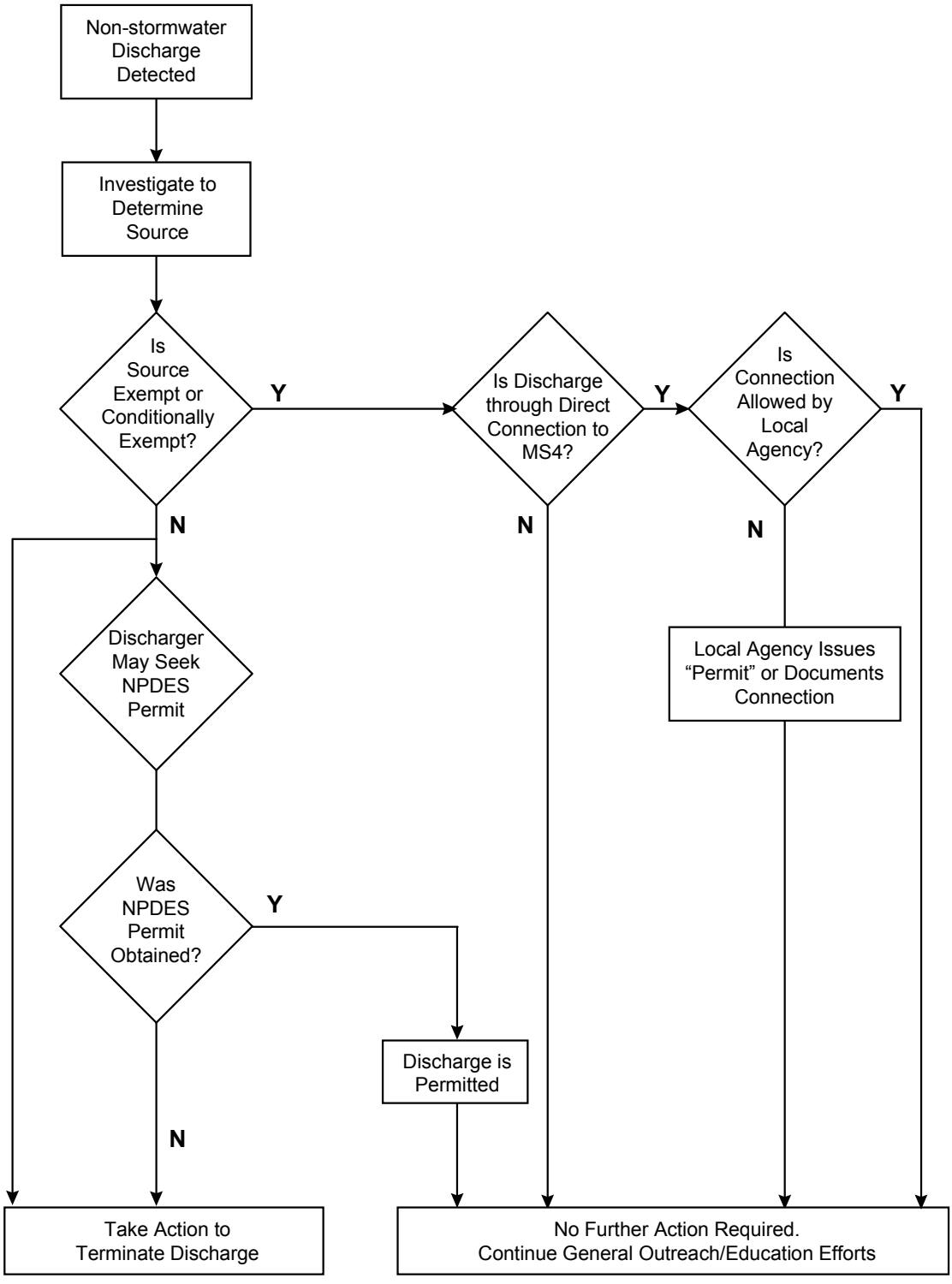


Figure 2: NPDES GENERAL PERMIT FOR SMALL MS4s (PHASE II)

Figure 3: Illicit Discharge Elimination Strategy



Attachment 1

Attachment 2

NPDES Phase II Permitting – Outfall Characterization
Pearblossom
Outfall # 1

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 1

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 2

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 3

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 4

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 5

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 6

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 7

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 8

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 9

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 10

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 11

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 12

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 13

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 14

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 15

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 16

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 17

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 18

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 19

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 20

NPDES Phase II Permitting – Outfall Characterization
Quartz Hill
Outfall # 21